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NATIONAL BEEF CATTLE BREEDING PROGRAM



United States Department of Agriculture

Conducted by the

BUREAU OF ANIMAL INDUSTRY
Agricultural Research Administration

With

Thirty-six States and
Hawaii cooperating.



November, 1951

PURPOSE OF THE PROGRAM

As a stockman you want cattle that will make the most money by producing the most beef from the least feed and, at the same time, yield the cuts of meat desired by the consumer. You need a yardstick to measure the qualities of your animals and a means of finding out how these qualities can be passed on to future generations in a sound breeding program.

The National Beef Cattle Breeding Program was established 3 years ago to satisfy these and other needs. Today experiment stations in 36 States and the Territory of Hawaii are working with the United States Department of Agriculture through this program to produce efficient beef animals of good quality. We are working to find better methods of breeding and to identify, genetically, lines of cattle that will help to solve your major problems.

We are realizing this objective in several ways. We are developing standards to measure efficient growth accurately so that beef cattle breeds, or crosses derived from them, can be properly evaluated. We are exploring the productiveness of existing breeds, measured by these standards, so that we may sort out the best available breeding stock. We are investigating the effectiveness of certain breeding systems that involve selection practices, inbreeding, line breeding, top crossing, and cross breeding, with a view to improving efficiency of production.

HOW IT IS ORGANIZED

The resources of the 37 cooperating experiment stations and the Federal Bureau of Animal Industry are being pooled to carry out the objective. In addition, private breeders, in increasing numbers, are engaging in the program. Major breed associations have provided financial assistance to various State projects in which they are interested. The United States Department of Agriculture acts as the coordinating agency of the entire program from a national standpoint.

The work is organized on a regional basis and divided into the western, north central, and southern regions.

State experiment stations in each region are conducting such projects as the following:

- Testing sires and cows to discover family lines of fast-gaining animals that will yield good meat carcasses.
- Making family, sib, and progeny tests of lines and crosses of these lines for rate and efficiency of gain and carcass quality.
- Developing methods of estimating the breeding value of young bulls with respect to type, growth rate, and efficiency.
- Developing strains of beef cattle particularly suited to the southeastern, Coastal Plain, and southwestern regions.
- Determining the effect, on performance, of different systems of feeding and management.
- Studying the effect of varying feed intake in order to find lines of cattle best adapted to various environments, particularly where seasonal and climatic change brings "ups and downs" in feed supplies.
- Developing inbred lines of beef cattle within established breeds.
- Comparing different conformation types and sizes of beef cattle under range and feed-lot conditions.
- Studying the heritability of the following characteristics: weight, grade, rate and efficiency of feed-lot gain, carcass grade and yield, resistance to cancer eye, and type and conformation.

WHERE IT IS TODAY

Although the National Beef Cattle Breeding Program has been in operation for only a relatively short time, it is based on an extensive body of information developed through many years of research by the Bureau of Animal Industry and State experiment stations. The program was created in October 1947, and Federal-State projects were prepared in 1948.

As of June 30, 1951, more than 12,900 cattle of breeding age were included in the program. These are divided into about 200 separate small herds or lines, composed prin-

cipally of Herefords, Aberdeen Angus, shorthorn, and Brahman, or crosses derived from these breeds. They are valued by the cooperating States at more than $3\frac{1}{2}$ million dollars. The total value of physical facilities and all cattle included in the program is now about 8 million dollars.

Colleges and experiment stations associated with the program are already beginning to release tested stock to cooperating breeders. Several experiment stations are conducting cooperative tests with private breeders, emphasizing such characteristics as weaning weight and rate of gain in feed lots. Specific information from these tests can be used to differentiate between good beef-producing animals and undesirable stock.

HOW YOU CAN BENEFIT

The beef cattle research program is in about the same position today that the corn breeding program was in the early twenties. We are now realizing the importance of tested stock in profitable beef production. We have seen the scientific proof that cattle from tested bulls bring extra dollars and cents to the stockman and more and better meat to the consumer.

Already a number of breeders in the Middle West are searching for tested stock because they have learned by experience that these animals are more profitable in the feed lot. Some buyers are offering 2 to 3 cents a pound above market price for feeder steers from tested bulls.

Through the use of tested stocks, it is possible to make a very material increase in our production of beef. Ten years ago we were satisfied if we had a steer that gained at the rate of 2 pounds a day. The results of recent research show that we can produce "3-pound-a-day" steers. The addition of even 0.2 pound per head per day in daily gain will mean, even at average beef prices, an additional income of more than 5 million dollars a year. Within the breed, type, and size of cattle that you prefer, you can improve rate of gain through selective breeding.

In order to begin now to benefit from the program--

- Contact your State Agricultural Experiment Station or Extension Service through your county agent to find out how the program operates in your State.
- Contact your local or State Cattleman's Association or Breed Registry Association. Many such organizations are working directly with the Bureau of Animal Industry and the State colleges in carrying out the national program.
- Find out as much as you can about the recommended practices of the program and put them to use.

COOPERATING EXPERIMENT STATIONS

<u>Western Region</u>	<u>North Central Region</u>	<u>Southern Region</u>
Arizona	Illinois	Alabama
California	Indiana	Arkansas
Colorado	Iowa	Florida
Idaho	Kansas	Georgia
Montana	Minnesota	Kentucky
Nevada	Missouri	Louisiana
New Mexico	Nebraska	Maryland
Oregon	North Dakota	Mississippi
Utah	Ohio	North Carolina
Washington	Oklahoma	South Carolina
Wyoming	South Dakota	Tennessee
Territory of	Wisconsin	Texas
Hawaii		Virginia

GPO-83-20483



